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## Archival Featured Article

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# Ego Identity and Substance Use of Ethnically Diverse College Students

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**ABSTRACT** - Ego identity (as measured by the Extended Objective Measure of Ego Identity Status scale) and drug use were studied within a sample of 409 Asian, Hispanic, and White American undergraduates, ages 17 to 30, attending a public university in California. Results indicated that Foreclosed participants were less likely to drink and smoke cigarettes, while Moratorium participants reported increased alcohol and cigarette use. White and Hispanic college students reported greater alcohol use than Asians. Limitations and future research directions were discussed. Using ego identity as a predictor of substance use is cautioned with ethnically diverse individuals.

**Keywords:**

Ego identity; Identity status; Substance use; Alcohol consumption; Cigarette smoking; College students; Ethnic differences

## Introduction

Alcohol and drug abuse continues to be a significant problem on college campuses (Hanson & Engs, 1992; Jackson, Sher & Park, 2006; Johnston, O'Malley & Bachman, 1991; National Survey on Drug Use & Health, 2004; Prendergast, 1994; Sheffield, Darkes, Del Boca & Goldman, 2005; Wechsler, Davenport, Dowdall, Moeykens & Castillo, 1994). Past studies have also found different patterns of substance use across ethnicity and gender. For example, Barnes and Welte (1983) found that White college students reported the highest alcohol use rates (87% of White participants reported using alcohol) in contrast to their African American (59%), Asian (35%),

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and Hispanic (64%) counterparts. Other college student surveys have also found drinking differences across gender (Bennett, Miller, & Woodall, 1999; Engs & Hanson, 1990; Lex, 1994), with males imbibing alcohol in greater frequencies and quantities than females.

The identification of predictors of substance use among college students, a high-risk population for substance abuse, is viewed as key to drug abuse prevention efforts. Along with demographic indicators of risk, such as being male or having a family history of substance addiction, psychological characteristics, such as ego identity, have been explored as predictors of vulnerability to substance abuse. To date, ego identity development has been investigated in relationship to alcohol and drug use in primarily White samples (Bentrim-Tapio, 2003; Bishop, Macy-Lewis, Schnekloth, Puswella & Struessel, 1997), but the construct has not been clearly evaluated as a predictor of substance use in ethnically diverse groups. The aim of the present study was to further investigate the applicability of ego identity as a predictor of substance use among ethnically diverse college students with otherwise similar demographic risk profiles.

### ***Ego Identity***

Ego identity was first proposed by Erikson (1963, 1968) in his fifth psychosocial stage of development, labeled identity achievement vs. role confusion. The central issue of this stage is resolving the question of "Who am I?" This identity crisis purportedly leads adolescents to experience confusion. To resolve the dilemma, they may experiment with different lifestyles (i.e., various religious or political ideologies, drug use, and affiliation with groups such as gangs, social clubs, or athletic organizations) until they commit to those values and practices that best suit them. Erikson described the process of ego identity formation along two dimensions: crisis (a period of exploratory behaviors, such as those described above) and commitment to values, beliefs, and standards as a result of going through these experiences. Marcia (1966) further developed the construct of ego identity and specified four different ego identity sub-categories: Diffused, Foreclosed, Moratorium, and Achieved. Diffused individuals were thought to be in a state of no crisis as well as expressing no particular commitment to idiosyncratic values, beliefs, or standards. Foreclosed individuals were likewise not in crisis, but endorsed commitment to core values, beliefs, and standards. Moratorium defined a state of identity crisis without adoption of a fixed set of values, beliefs, and standards. Finally, Achieved individuals were thought to have gone through a period of exploration (e.g., crisis), which had, in turn, led them to internalize certain values, beliefs, and personal standards.

Notably, Marcia (1989) cautioned investigators about generalizing ego identity as defined by these typologies to ethnically and culturally diverse individuals. Marcia found that Foreclosed status was common in societies where survival was of primary importance, but Achieved status was more frequent in societies that offered opportunities for exploration of lifestyles to its members. Interestingly, Branch (2001) found that Hispanic American participants scored highest on the Diffused and Foreclosed subscales of the Extended Objective Measure of Ego Identity Status (EOMEIS; Adams, Bennion & Huh, 1989) in comparison to their African American, Asian and White peers. Consistent with the notion of culture influencing ego development, Graf (2003) emphasized that many American and European psychologists view separation and independence

from parents as an indicator of maturity; however, adolescents from collectivistic cultures, such as many Hispanic and Asian cultures, may grow to be autonomous while maintaining close relationships with their parents. These findings suggest that ego identity might represent very different meanings for ethnically diverse individuals. The focus of the present study, to test the applicability of ego identity across ethnic diversity with substance use as the outcome measure, is one attempt to address this issue.

### ***Ego Identity and Alcohol and Drug Use***

Bishop et al. (1997) examined alcohol use patterns and ego identity status among a sample of first year college students; there was no mention of participant ethnicity. The authors found that Diffused and Foreclosed participants reported the highest levels of alcohol consumption. Bentrin-Tapio (2003) also described correspondence between the four ego identity categories and alcohol use among a sample of undergraduate college students (again, participant ethnicity was not specified). Foreclosed males consumed greater quantities of alcohol than did males classified in Moratorium status. Ego identity status did not significantly predict alcohol consumption levels in females in this study.

### ***Ego Identity, Ethnicity, and Substance Use***

While past studies of alcohol and drug use across ethnicity focused primarily on contrasting drug use patterns of White and African Americans (Clements, 1999; Prendergrast, 1994), less is known about the correlates of substance use trends among the two fastest growing ethnic minority groups in the U.S., that of Asian and Hispanic Americans. Substance abuse is also a major health problem for young adults, such as college students. Hence, the utility of ego identity development was examined in light of its relationship to substance use in a sample of White, Asian, and Hispanic American college students. It was hypothesized that White respondents would be more likely than Hispanic and Asian American participants to drink and use drugs, with Asians endorsing the lowest frequencies of alcohol and substance consumption (consistent with previous research). Diffused and Foreclosed individuals were predicted to report the highest alcohol and drug use as compared to Moratorium and Achieved participants, at least for the White participants. No predictions were made for Hispanic or Asian participants in reference to ego identity typologies and alcohol/drug use, given the limited available research. Additionally, it was predicted that males would endorse greater consumption of alcohol and other drugs than females.

## **Method**

### ***Participants***

A total of 409 individuals (141 males or 34.47% of the sample, and 268 females or 65.53% participated in this study. Participants were Asian ( $n = 140$ ; 34.2%; 53 males, 87 females), White ( $n = 148$ ; 36.2%; 44 males, 104 females), and Hispanic ( $n = 121$ ; 29.6%; 44 males, 77 females) undergraduates recruited from various psychology classes at a large public university in Southern California. All participants received course credit in exchange for their participation. Asian participants were mainly of Vietnamese ( $n = 39$ ; 28.26%), Filipino ( $n = 36$ ; 26.09%), and Chinese

( $n = 20$ ; 14.49%) descent, but also of Japanese, Korean, and other origins to a lesser extent. Most White participants did not specify any particular ethnicity, referring to themselves as "American" ( $n = 63$ ; 43.15%). The remaining White participants were mostly Irish ( $n = 19$ ; 13.01%) and Italian ( $n = 9$ ; 6.16%), or other European origins. Regarding Hispanic participants, the vast majority was of Mexican descent ( $n = 96$ ; 82.76%) with others of El Salvadoran, Puerto Rican, and other Hispanic or Latin origins.

The age range was 17 to 30 years, with a mean age of 19.44 and a modal age of 18.0. The majority of students were freshmen ( $n = 190$ ; 47.5%), followed by sophomores ( $n = 95$ ; 23.75%). Asians and Whites reported the highest average annual income range (\$55,000-74,999), with Hispanics reporting the lowest yearly average income range (\$25,000-49,999). White participants reported the highest prior and current alcohol use by their mothers (63.7% and 33.6%, respectively). Hispanics reported the highest alcohol use (prior and present) for their fathers (83.1% and 44.5%, respectively). Asian parents were reported to have the lowest alcohol intake (13% of Asian mothers use alcohol; 40% of Asian fathers drink).

Concerning ego identity, 34.75% ( $n = 139$ ) of the sample was classified as Diffused, 13.5% ( $n = 54$ ) as Foreclosed, 43.25% ( $n = 173$ ) as Moratorium, and 8.5% ( $n = 34$ ) as Achieved. Moratorium was the most common classification for males (41.1%;  $n = 58$ ), females (44.8%;  $n = 120$ ), Hispanic (45.5%;  $n = 55$ ), and White (52%;  $n = 77$ ) respondents. Asian participants were most frequently classified as Diffused (43.6%;  $n = 61$ ).

## Measure

Participants completed a self-report "paper-and-pencil" protocol:

*Extended Objective Measure of Ego Identity Status - 2nd edition (EOMEIS)*. Developed by Adams et al. (1989) to assess an individual's ego identity status, this measure is comprised of 64 items. Individuals are assigned to one of the four ego identity statuses of Diffused, Moratorium, Foreclosed, and Achieved for each of two types of ego identity (e.g., ideological and interpersonal) based on their scores, with higher scores indicating greater affinity with the respective ego identity category. Consistent with previous research (Bentrim-Tapio, 2003; Bishop et al., 1997), only the ideological ego identity scores were used, as there is some question as to the reliability of the interpersonal subscales. Bennion and Adams (1986) reported generally acceptable internal reliability for the ideological subscales (Diffused  $r = .62$ ; Moratorium  $r = .75$ ; Foreclosed  $r = .75$ ; Achieved  $r = .62$ ).

*The Core Alcohol and Drug Survey- 5th edition (Core)*. The Core is an 11-item questionnaire meant to obtain information about the respondent's beliefs, consequences, frequency, and intensity of alcohol and other drug use (Presley et al., 1994). Content-related validity was assessed and the inter-rater agreement for item inclusion was .90, indicating that the Core survey is a stable, reliable instrument.

## **Procedure**

Participants were run in small groups of 4 to 6 by ethnically diverse experimenters. The study was approved by the site university's research review board and conducted in accordance with ethical and legal guidelines of research involving human participants.

## **Results**

### ***Ego Identity and Substance Use***

Correlation analyses were performed to investigate the relationship of ego identity to substance use. High scoring Diffused participants were the most likely to report drinking in the past two weeks ( $r = .146, p < .01$ ). Foreclosed participants were the least likely of the four ego identity groups to smoke or drink to excess, with significant negative correlations seen for quantity (i.e., average number of cigarettes smoked per week  $r = -.178, p < .01$ ), and annual frequency of use of tobacco and alcohol ( $r$ 's =  $-.164$  &  $-.157$ , respectively,  $p < .01$ ). Positive correlations emerged for Moratorium participants and use of tobacco ( $r = .119, p < .05$ ), alcohol ( $r = .103, p < .05$ ), and marijuana ( $r = .101, p < .05$ ). No significant relationships were found between the ego status of Achieved and any of the CORE drug use items.

### ***Ethnicity, Gender, and Substance Use***

A 3 (Ethnicity: Asian, Hispanic, White) X 2 (Gender) between-groups multivariate analysis of co-variance (MANCOVA), with annual income, mother's previous and current alcohol use, and father's previous alcohol use as the identified covariates, was conducted to identify possible ethnic and gender group differences of alcohol and drug use in the sample. Wilks' Lambda values are reported for all MANCOVA findings. Significant main effects were observed for Ethnicity ( $F(66, 718) = 1.69, p < .001$ ) and Gender ( $F(33, 358) = 2.21, p < .001$ ), but no interaction effects emerged.

### ***Ethnicity and Substance Use***

A main effect for ethnicity was demonstrated on several indices of drug use. Group differences emerged for all three ethnic groups on reported drinks per month,  $F(2, 390) = 3.13, p < .045$  (Whites reported the highest use,  $M = 1.27, SD = 1.36$ , followed by Hispanics  $M = 1.14, SD = 1.15$ , with Asians reporting the lowest use rates  $M = 0.76, SD = 1.20$ ); tobacco use in the past year,  $F(2, 390) = 3.26, p < .039$  (Whites endorsed the highest use  $M = 1.86, SD = 2.78$ , followed by Asians,  $M = 1.71, SD = 2.82$ , and Hispanics,  $M = 1.12, SD = 2.18$ ), and on sedative use in the past year,  $F(2, 390) = 5.88, p < .003$  (Whites reported the highest use,  $M = 0.1, SD = 0.55$ , followed by Asians,  $M = 0.01, SD = 0.11$ , and Hispanics,  $M = 0.0, SD = 0.0$ ). Although group differences emerged for sedatives, it is noted that extremely low rates of reported use of illicit substances other than marijuana were documented for this sample. For example, Hispanics reported no use of sedatives, while only 2 (1.4%) Asians and 6 (4.1%) Whites endorsed the use of sedatives once or more in the past year. All three groups reported the use of marijuana, cocaine, hallucinogens, amphetamines, inhalants, steroids, and "club drugs" such as MDMA, to a similar extent, with no significant group differences seen.

Pairwise comparison tests indicated that White and Hispanic participants reported consuming alcohol more frequently and in greater quantities than Asian participants to a significant extent. No differences in alcohol use emerged across White and Hispanic participants. Also, incidents of hangovers within the last year were the highest among Whites ( $M = 1.39$ ,  $SD = 1.59$ ), followed by Hispanics ( $M = 1.25$ ,  $SD = 1.44$ ) and Asians ( $M = 0.74$ ,  $SD = 1.23$ ).

### ***Gender and Substance Use***

Significant differences across gender were demonstrated for average number of alcoholic drinks per week ( $F(1, 390) = 18.0$ ,  $p < .001$ ), per month ( $F(1, 390) = 16.8$ ,  $p < .001$ ), and within the last year ( $F(1, 390) = 6.82$ ,  $p < .009$ ), tobacco use within the last month ( $F(1, 390) = 5.72$ ,  $p < .017$ ) and year ( $F(1, 390) = 3.94$ ,  $p < .048$ ), as well as for other drugs used including marijuana ( $F(1, 390) = 10.7$ ,  $p < .001$ ), cocaine ( $F(1, 390) = 7.58$ ,  $p < .006$ ), and hallucinogens ( $F(1, 390) = 6.82$ ,  $p < .009$ ). Significant differences across Gender were also seen for reported hangovers ( $F(1, 390) = 7.16$ ,  $p < .008$ ), for poor academic performance ( $F(1, 390) = 13.5$ ,  $p < .001$ ) and number of missed classes related to drug use ( $F(1, 390) = 12.4$ ,  $p < .001$ ), number of alcohol/drug related incidents with authorities ( $F(1, 390) = 12.3$ ,  $p < .001$ ), property damage due to intoxication ( $F(1, 390) = 15.9$ ,  $p < .001$ ), driving under the influence ( $F(1, 390) = 12.0$ ,  $p < .001$ ), criticism by others for substance use ( $F(1, 390) = 8.95$ ,  $p < .003$ ), and drug-related memory loss ( $F(1, 390) = 7.27$ ,  $p < .007$ ). For all indices, males endorsed substance use or substance-related negative outcomes at greater frequencies than females.

## **Discussion**

### ***Ego Identity, Ethnicity, and Substance Use***

Results with this ethnically diverse sample of college students were somewhat inconsistent with past research using primarily White participants. Previous investigators (Bentrim-Tapio, 2003; Bishop et al., 1997) found that substance use was most frequent among individuals of the Diffused and Foreclosed ego identity typologies, the two ego identity statuses considered less developed or mature than the Moratorium or Achieved typologies. In the present study, ego identity was expected to predict alcohol and drug use, with Diffused and Foreclosed participants (specifically, those who were also White) hypothesized to report higher levels of use of alcohol and other drugs than their Achieved and Moratorium cohorts. Instead, results indicated that Moratorium participants were the most likely to drink, smoke cigarettes and use marijuana, while Foreclosed respondents were the least likely to report drinking, smoking, and using illicit drugs. Consistent with past literature, Diffused respondents generally endorsed greater alcohol use. A lack of correspondence was found for Achieved participants and drug use.

These findings may suggest that the ego identity constructs, as measured by the EOMEIS (Grotevant & Adams, 1984) do not necessarily transfer to Asian or Hispanic American populations or at least, not in a parallel fashion to their White counterparts. Inconsistent results of recent cross-cultural studies using the EOMEIS have been reported in the psychological literature (Lewis, 2003; Ohnishi et al., 2001; Schwartz, Adamson et al., 2006). For example, Schwarz et al. (2006) conducted an evaluation of the EOMEIS involving White American, Hispanic American,

and White Swedish participants. Differences were found across all three groups, with the Swedish sample scoring significantly higher than the American samples on several EOMEIS scales. Swedes scored highest on Foreclosure, while Hispanic Americans scored higher than White Americans on Diffused and Moratorium. In the present study, Hispanic and White participants did not differ on the Diffused typology. In contrast to the findings of Schwarz et al., the opposite trend was found for Moratorium, with White participants in the present study scoring higher on this subscale than their Hispanic counterparts.

Marcia (1989) observed that ego identity development is influenced by the (cultural) context in which it occurs. While Branch (2001) found that Diffused and Foreclosed ego typologies were most common among Hispanic versus Asian and White participants, in the present study, our participants were most likely to identify as Moratorium (Whites and Hispanics) followed by Diffused (the most frequent ego identification of Asian participants). Interestingly, the least common ego identity status was Achieved for Hispanic and Asian participants, and it was the second least common for White participants.

Inconsistencies with prior research findings of the relationship between ego identity and drug use bring up several concerns that are not uncommon in multiethnic investigations. In past studies of ego identity by Bishop et al. (1997) and Bentrim-Tapio (2003), the samples were likely predominantly composed of White American participants. The pattern that emerged would most likely represent that aggregated ethnic group. Ego identity development among members of ethnic groups residing in White majority cultures, on the other hand, may be quite different in comparison. Researchers using available constructs and measures may be attempting to fit diverse participants into a mold that was defined by and is most representative of the majority group of the original sample. It is critical to consider issues such as construct applicability and measurement accuracy. For instance, Martinez (2006) reported that ego identity was positively related to acculturation, and that generation level was related to the Foreclosed ego identity status among Mexican American college students. Acculturation and generation level are thus important aspects to consider in future investigations.

### ***Ethnicity and Substance Use***

It was hypothesized that White respondents would report higher rates of use of alcohol and other drugs than their Asian and Hispanic peers. Ethnicity was indeed found to be a significant factor in predicting drug use among this sample, but not quite as anticipated: White and Hispanic participants did not differ in their alcohol intake. Whites and Hispanics reported greater use of alcohol than Asians across all timeframes, with an average of three drinks per week for White participants, two drinks per week for Hispanic participants and less than two drinks per week for Asians. Crowley (1991) found that White and Hispanic college students' drinking patterns were very similar to one another, with lower consumption rates for their non-collegiate ethnic peers. Similar trends were seen in the current study: the reported average frequency and intake of alcohol was quite modest overall. In terms of Asian college students' use of alcohol, in 1996, Keefe and Newcomb compared White and Asian college students who were under 21, finding that Asian

students drank less than their White peers. Their results are also consistent with those of the present study.

### ***Gender and Substance Use***

It was predicted that men would report drinking and using drugs more often and at higher levels than women. Our findings were consistent with past research (Clements, 1999; Presley et al., 1994) on alcohol and other drug use across men and women. The predicted gender difference was observed for the use of alcohol, tobacco, marijuana, cocaine, and hallucinogens.

### ***Generation and Cultural Exposure***

The majority of our White (95.9%) and Hispanic (86.8%) participants were born and raised in the U.S., while most of the Asian participants (61.4%) in the present sample were born outside the U.S. It may be that differences in cultural views and practices regarding drug use influenced results. Also, acculturation was not measured in this study and certainly could have played a role in the substance use differences of the Asian vs. non-Asian participants.

The present sample resided in an ethnically diverse region, (i.e., Southern California), and were subject to influences from their own culture as well as those that they encountered in their everyday lives. As a result, it is possible that ego identity may correspond to different behavioral choices regarding drug use. For example, Achieved ego identity is thought to represent an individual who has already experimented with alcohol and other drugs, and it is assumed that the Achieved person would decide to refrain from drug use. However, endorsement of Achieved items may reflect different conclusions for individuals operating in a multicultural context, such as incorporating a typical “American” practice of drinking alcohol into one’s social activities with culturally diverse others, where drinking may be a point of communality. The Achieved participants in our sample were quite moderate in their reported use of drugs, in contrast to other college student samples (Engs & Hanson, 1989; Johnston et al., 1996; Miller et al., 2000; Prendergrast, 1994; Walfish et al., 1981).

### ***Study Limitations***

The geographic region where the study was conducted, that of California, may have limited generalizability of the present results to similar groups residing in other regions of the United States. For example, few differences were found across ethnicity or gender for tobacco use. California has strict non-smoking policies in all public buildings and California residents in general are less likely to be cigarette smokers than residents of other areas in the nation. The Center for Disease Control (2001) found that only 17.2% of California adults reported current cigarette smoking (20.1% for men; 14.4% for women), compared to the national smoking rate of 27.1% for men and 22.5% for women (CDC, 2002a). Other possible limitations include the predominantly female sample of college students and the participants being recruited from psychology classes at one university.

Our study found that White and Hispanic participants reported greater alcohol use than their Asian cohorts. Such findings may be useful for purposes of increasing the effectiveness of campus



alcohol and drug prevention programs and in targeting the needs of culturally diverse groups of college students. For example, alcohol prevention programs may apply primarily to White and Hispanic American students, while Asian students, particularly international Asian students (e.g., born and raised outside of the U.S.), may be more likely to benefit from awareness programs on the health hazards of cigarette smoking (although this approached but did not reach significance, Asian participants in the present study indicated the greatest use of tobacco when compared to their Hispanic and White peers). Whether personality constructs such as ego identity may be useful in predicting substance use within specific ethnic and cultural groups also remains uncertain and in need of further investigation.

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